

WHAT IS CLAIMED IS:

1. A method of providing a telephone connection to a phone number over a network from a client connected to the network, the method comprising the steps of:

5 sending the phone number and an information request from the client to a central server;

providing from the central server to the client, addresses of one or more providers and the requested information;

10 selecting in accordance with a selection criteria the best provider from the one or more providers; and

connecting a network voice path to the phone number through the address of the best provider.

15 2. The method of claim 1 wherein the selection criteria is based on latency and unit of time cost.

3. The method of claim 1 further comprising the step of pinging each of the addresses by the client after the providing step.

20 4. The method of claim 1 wherein a failure in the connecting step is followed by the step of selecting the next best provider and connecting to the next best provider.

5. The method of claim 1 where the network is the Internet.

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6. An apparatus for providing a voice connection over a network from a client site, the apparatus comprising:

a data communication device at a client site for providing full duplex data transfers to the network, the data communication device adapted to request information from other devices on the network;

5 a central server coupled to the network and having logic for sending requested provider information related to one or more providers to the data communication device where provider information includes unit cost information and an address for each provider; and

10 selection logic within the client to determine the best provider.

7. The apparatus of claim 6 wherein the selection logic decision is based on latency and unit cost.

15 8. The apparatus of claim 6 wherein the network is the Internet.

9. The apparatus of claim 6 wherein the central server has a provider table for storing information about providers.

20 10. The apparatus of claim 9 wherein the provider table may be updated by each of the one or more providers.

11. A method of providing a voice connection over the Internet from a user site having a communication device, the method comprising the steps of:

entering a phone number in the communication device;

sending the phone number and a provider information request from the communication device to a central server;

providing from the central server to the communication device a list of one or more providers satisfying a pricing criteria;

pinging each of the one or more providers to determine latency;

selecting the best provider from the one or more providers where the dominant selection factor is unit cost with a selection algorithm a desired provider from the one or more providers; and

connecting an Internet voice path to the phone number through the desired provider.

15 12. A system for providing a voice connection over the Internet to one or more clients, the apparatus comprising:

a central server coupled to a network, the central server having a table of provider information where the table includes pricing information and phone number patterns, the central server further having a communication protocol for responding to inquiries from the one or more clients; and

client logic for requesting information from the central server and for selecting a best provider.

13. A method for providing phone service to a client over a network including a billing process, the method comprising the steps of:

requesting, by the client, provider information about one or more providers from a central server, where each of the providers is capable of connecting to a phone number furnished by the client;

5 determining from the provider information and latency measurements the best provider from the one or more providers;

sending a ticket signed by a client private key to the best provider; and
verifying with a client public key the validity of the ticket.

10 14. The method of claim 13 further comprising the step of:
forwarding the valid ticket to the central server.

15 15. The method of claim 14 where the forwarding step comprises the steps of:
signing, at the central server, the client public key with a server private key;
and
verifying with a previously obtained server public key the validity of the client
public key.

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16. A system for providing a voice connection over a network, the system comprising:

5 one or more providers connected to the network, the providers having provider information related to the voice connection;

a central server connected to the network and having a table for storing and updating provider information, the central server having server logic for filtering provider information; and

10 to receive filtered provider information from the central server, the client having client logic for determining the best provider and for establishing a voice connection through the best provider to the phone number.

17. A method of providing distributed phone service over the Internet, the method comprising the steps of:

forwarding a user phone number to a user provider;

verifying that the user phone number is authorized for the distributed phone service and retrieving the forwarding number;

20 contacting, by the user provider, a central server having a list of one or more providers willing to deliver a connection to the forwarding number; and

selecting a best provider from the one or more providers and establishing a connection via the best provider.

25 18. The method of claim 17 comprising the additional step of:

billing the user for the call after the call has ended.

19. A system for providing disputeless billing for network phone service to a client over a network including having a central server and a provider, the system comprising the steps of:

5 generating a client private key and a client public key;
sending a ticket signed by the client private key to the provider; and
verifying by the provider, using the client public key, that the ticket is valid.

10 20. A system for providing disputeless billing for network phone service to a client over a network including having a central server and a provider, the system comprising the steps of:

generating a client private key and a client public key;
registering the client public key with the central server;
transmitting a ticket signed by the client private key to the provider;
requesting, by the provider to the central server, the client public key;
furnishing the provider the client public key; and
verifying by the provider, using the client public key, that the ticket is valid.

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21. A system for providing disputeless billing for network phone service to a client over a network including having a central server and a provider, the system comprising the steps of:

- 5 generating a client private key and a client public key;
- registering the client public key with the central server;
- transmitting a ticket signed by the client private key to the provider;
- requesting, by the provider to the central server, the client public key;
- signing, at the central server, the client public key with a central server private key and sending results to the provider;
- 10 verifying by the provider, using the server public key, that the client public key is valid; and
- verifying by the provider, using the client public key, that the ticket is valid.